485973

**URS**

November 21, 2000

US EPA Region VIII
Attn. Mr. Paul Peronard, 8EPR-EP
On-Scene Coordinator
999 18th Street, Suite 500
Denver, CO. 80202-2466

501 Mineral Avenue
Libby, MT 59923

RE: US EPA Region VIII Unilateral Administrative Order (UAO) No. CERCLA-8-2000-10, Libby, Mt. Export Plant Weekly Report for November 17 through November 23, 2000.

Dear Mr. Peronard:

Per the above referenced Unilateral Administrative Order, please find attached a weekly report describing the activities that occurred during the week of November 17 through November 23, 2000, at the Libby, Mt. Export Plant.

Please call if you have any questions concerning this submittal.

Sincerely,

Peter Perdek
for Jim Stout

Mr. Jim Stout
Site Project Manager

Attachment

| | | |
|---|---|---|
| cc: | John Constan | Montana DEQ |
| | Ken Lund | Holme, Roberts & Owen |
| | Bob Mariam | W.R. Grace |
| | Karen Brown | W.R. Grace |
| | Ray Lidstrom | URS |

URS Corporation
707 17th Street, Suite 3400
Denver, CO 80202
Tel: 303.292.0800
Fax: 303.292.5860

November 21, 2000

US EPA Region VIII
Attn. Mr. Paul Peronard, 8EPR-EP
On-Scene Coordinator
999 18th Street, Suite 500
Denver, CO. 80202-2466

501 Mineral Avenue
Libby, MT 59923

Dear Mr. Peronard:

**Progress Report for the Week of November 17 – November 23, 2000**

The Weekly Progress Report for the period of November 10 – November 16, 2000 was submitted to the EPA and State on November 17, 2000.

At Export Plant

- An erosion inspection of the Export Plant site is conducted daily.
- Dust control measures continue to be utilized according to the Dust Control Plan (Appendix F).
- Soil removal activities have been completed at the west side of the site with the exception of minor excavation work around the rail spur that is to remain.
- Soil removal activities have been relocated to the eastern end of the site. Excavation has been completed to 18 inches in grids U,V,AA, and AB. Partial excavation has occurred in grid X and is currently underway in grid P.
- Confirmation soil samples have been sent for analysis from grids Z, Y, Q, R, H, I, G, AA, and AB.
- Addendum No. 11, to reduce the size of the exclusion zone at the eastern end of the Export Plant site, has been verbally approved.
- The exclusion zone at the eastern end of the Export Plant site has been reduced to allow backfilling in this area.
- Currently two excavators and 11 trucks are participating in soil excavation and hauling.
- Through November 20, 2000, 255 truckloads (approximately 5,100 cubic yards) of back-fill material from the Plum Creek gravel pit have been delivered to the Export Plant site. It is anticipated that approximately 800 cubic yards will be delivered to the eastern end of the Export Plant site on November 21, 2000. Two track dozers are currently working to grade the area to the original grade.

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- Site surveying was completed at the eastern end of the Export Plant site to determine material volume excavated.

At Millwork West

- The planer run by Millwork West personnel continues.
- A quarter page add indicating the Millwork West move continued in The Western News newspaper.
- A television add indicating the Millwork West move continued to run.

At Mine Disposal Site

- URS continued to dispose of miscellaneous debris from the Export Plant location at the toe of the 12th level dump at the mine.
- URS continues to dispose of soil excavated from the Export Plant at the area adjacent to the Glory Hole at the mine.

**Problems and Issues**

- Addendum No. 10 concerning back-fill source and specifications has been verbally approved.
- Addendum No. 11 to reduce the size of the exclusion zone at the eastern end of the Export Plant site has been verbally approved.
- URS has received a permit from MDEQ to locate the excavated oily soil (approximately 70 yards) to a new land farm at the mine.

**Analytical Data Received**

- No new TEM data has been received. PCM results for all perimeter, area, and personal samples are attached for November 17, 2000 and November 18, 2000.
- No soil samples have been received during the past week.

**Material Movement and Disposal**

- Two truckloads of debris were disposed of at the toe of the 12th level dump at the mine during the past week. This included miscellaneous cleaning materials. To date 183 truckloads of debris have been disposed of at the mine site.
- 240 truckloads of soil excavated from the Export Plant site were disposed of at the area adjacent to the Glory Hole at the mine during the past week through November 20, 2000. It is anticipated that 70 truckloads of soil will be excavated and disposed of on November 21, 2000. Through November 20, 2000 1,089 truckloads of soil have been disposed of at the mine site.

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- Through November 20, 2000 approximately 5,100 cubic yards of material have been delivered to the Export Plant site from the Plum Creek gravel pit. It is anticipated that approximately 800 cubic yards of material will be delivered on November 21, 2000.

**Health and Safety**

- All visitors, workers, and contractors conducting activities within the mine site must adhere to level C PPE restrictions.
- Koch Environmental continues to collect perimeter and area air samples at the Export Plant. Personal air samples are also being collected from the truck drivers and from workers at the mine disposal areas.
- One minor fall on ice was reported during the past week.

**Anticipated Developments Next Week**

- Back-filling the Export Plant will continue.
- Excavation activities will continue at the eastern-end of the Export Plant site.
- Hand-excavation will be completed around the railroad spur that is to remain.
- Millwork West personnel will continue the planer run.

**Planned Resolutions or Anticipated Problems**

- URS has received a permit from MDEQ to locate the excavated oily soil (approximately 70 yards) to a new land farm at the mine.

**Schedule**

- Thanksgiving break: November 22-27, 2000. Resume work on November 28, 2000.

Respectfully,

For Jim Stout

Jim Stout
Project Coordinator
Libby Asbestos Site

Attachments

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Denver, CO 80202
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# KOCH ENVIRONMENTAL HEALTH, INC.
## AIR CONTAMINANT SAMPLING FORM

| DATE: | CLIENT: URS Radian | PROJECT CONTACT: | PROJECT LOCATION: | SAMPLING REP: |
|---|---|---|---|---|
| 1/17/00 | PROJECT #: 21001-001 | Tim Gish | W.R. Grace Vermiculite Plant - Plant wide<br>WORK AREA: Libby, MT | Patrick M. Gunn<br>ANALYSIS BY: P. McGovern |

| SAMPLE TYPE: | PUMP CALIBRATION: | FILTER TYPE: | TEM FILTER: | FILTER FCA: | MICROSCOPE FIELD AREA: |
|---|---|---|---|---|---|
| Asbestos ✓ (NIOSH 7400)<br>Lead ☐ (NIOSH 7082)<br>Other ☐ _____<br>Method: _____ | Rotameter ✓<br>ID _____<br>Other: _____ | ___ 0.8 um 25 mm MCE<br>___ charcoal tubes<br>___ Silica Gel<br>___ Other .45 TEM | ✓ MCE <0.45um 25mm<br>___ PC <0.45um 37mm<br>Mfl. _____<br>Lot No. 1500 | ✓ 385 mm²<br>_____ mm²<br>___ NA | ✓ 0.00785 mm²<br>_____ mm²<br>___ NA |

| SAMPLE NUMBER/ PUMP NUMBER | SAMPLE TYPE | SAMPLE DESCRIPTION, LOCATION | ACTIVITY | TIME (24 HOUR CLOCK) Start | Stop | Total | FLOW RATE (L/MIN) Start | Stop | Avg. | AIR VOLUME (L) | DETECT. LIMIT OR LOQ | FIBERS/ PER FIELD | CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| — | Field Blank | — | — | — | — | — | — | — | — | — | — | — | — |
| — | Field Blank | — | — | — | — | — | — | — | — | — | — | — | — |
| P#13 | P | Inside Truck - worn by Vernon Cunningham | loading trucks @ export plant & dumping them at the mine. | 0745 | 1445 | 420 | 2.0 | 0.50 | 1.25 | 525.00 | 0.005 | 4/100 | < LOQ |
| P#14 | P | Inside Truck - worn by Terry Hoithaus | | 0749 | 1449 | 420 | 2.0 | 2.0 | 2.00 | 840.00 | 0.003 | 5.5/100 | LOQ |
| P#15 | P | Inside Truck - worn by - Ben Cook | | 0747 | 1447 | 420 | 2.0 | 0.50 | 1.25 | 525.00 | 0.005 | 3/100 | < LOQ |
| P#16 | EX | Inside Truck - worn by - Terry Hoithaus | | 1449 | 1519 | 30 | 2.0 | 2.0 | 2.00 | 60.00 | 0.045 | 3/100 | < LOQ |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Blind Recount | | | | | | | | | | | | | |

**Key:**

| Sample Type: | | | Activity: | | |
|---|---|---|---|---|---|
| | P = Personal | BAK = Background | | PREP = Work Area Preparation | BO = Bagout |
| | Ex = Excursion | A = Ambient Air | | REM - Removal | TD = Tear Down |
| | IWA = Inside Work Area | HEX = HEPA Exhaust | | GB - Glovebag | PP - Paint Prep |
| | OWA = Outside Work Area | CL = Clearance Sample | | FC - Final Cleaning | |

URS

Project No. 805169
File Code No. 4.5.6.2.239
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, CO 80127
Phone: (303) 932-8484 FAX: (303) 932-8585

# CONTRACTOR PERSONNEL AIR SAMPLING SUMMARY

| | | | |
|---|---|---|---|
| **Client:** URS Radian<br>**Project:** 21001-001 | **Project Contact:** Tim Gish | **Location:** WR Grace Vermiculite Plant. Plant wide<br>Libby, MT | **KEH Rep:** Patrick McGovern<br>**Analysis By:** Patrick M. Gurven |

| | | | | |
|---|---|---|---|---|
| **Date:** 11/17/00 | **Calibration:** ✓ Rotameter ____ ID<br>____ Other ____ ID | **Microscope Field Area:** ✓ 0.00785 sq mm<br>____ other ____ sq mm | **PCM Filter:** ✓ 0.8 um25mm Mft.____<br>____ 0.8 um37mm Lot#____ | **Other Media:** ____ Type Mft.____<br>____ Type Mft.____ |

| | | | |
|---|---|---|---|
| **Name:** Vernon Cunningham<br>**SSN:** 517-70-9213 | **Name:** Terry Holthaus<br>**SSN:** 481-58-4024 | **Name:** Ben Cook<br>**SSN:** 544-40-9834 | **Name:** ____<br>**SSN:** |

| Sample # | Minutes | Volume | F/cc | Sample # | Minutes | Volume | F/cc | Sample # | Minutes | Volume | F/cc | Sample # | Minutes | Volume | F/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TOTAL | | | | TOTAL | | | | TOTAL | | | | TOTAL | | | |
| P13 | 420 | 525.00 | <LOQ | P14 | 420 | 840.00 | LOQ | P15 | 420 | 525.00 | <LOQ | | | | |
| | | | | P16 | 30 | 60.00 | <LOQ | | | | | | | | |

| | | | |
|---|---|---|---|
| TWA: 0.001 f/cc (LOQ) | TWA: 0.001 f/cc (LOQ) | TWA: 0.001 f/cc (LOQ) | TWA: N/a |
| Comments: 0.420/480 | Comments: 0.420+0.03/480<br>0.450/480 | Comments: 0.420/480 | Comments: |

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Project No. 805169
File Code No. 4.5.b.2.240
Doc No.

# KOCH ENVIRONMENTAL HEALTH, INC.
# ASBESTOS FIBER COUNT WORKSHEET

| DATE: 11/17/00 | KEH PROJECT #: 21001-001 | KEH REP: Patrick McGurren |
|---|---|---|
| | MICROSCOPE ID #: 1 | ANALYST: Patrick McGurren |

| SAMPLE # | FIBER COUNT | F/N | F/N - B/NB / 100 | FIBERS/MM² | SAMPLE VOL. (L) | LOQ (fibers/cc) | FIBERS/CC | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| Field Blank | – | – | – | – | – | – | – | – |
| Field Blank | – | – | – | – | – | – | – | – |
| P13 | 4.0 | 4/100 | 4/100/.00785 | 5.10 | 525.00 | 0.005 | <LOQ | – |
| P14 | 5.5 | 5.5/100 | 5.5/100/.00785 | 7.01 | 840.00 | 0.003 | LOQ | – |
| P15 | 3.0 | 3/100 | 3/100/.00785 | 3.82 | 525.00 | 0.005 | <LOQ | – |
| P16 | 3.0 | 3/100 | 3/100/.00785 | 3.82 | 60.00 | 0.045 | <LOQ | – |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Blind Recount | | | | | | | | |

## SAMPLING INFORMATION:

| Effective Collection Area of Filter: | Microscope Field Area: | NIOSH 7400 Method A Rules ✓ |
|---|---|---|
| ✓ 385 mm², 25 mm filter | ✓ 0.00785 mm² | |
| 855 mm², 37 mm filter | other (list) | Other Method |

## ANALYTICAL INFORMATION:

MICROSCOPE ADJUSTMENTS: ✓ phase test ✓ micrometer ✓ adjust field iris ✓ adjust phase rings ✓ focus on samples

## ANALYST INFORMATION:

DATE: 11/18/00 ANALYST: Patrick McGurren SIGNATURE: [signature]

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Project No. 805169
File Code No. 4.5.6.2.241
Doc No.

KEH97/FORMS/FIBERFRM

# KOCH ENVIRONMENTAL HEALTH, INC.
## AIR CONTAMINANT SAMPLING FORM

| DATE: | CLIENT: URS Radian | PROJECT CONTACT: | PROJECT LOCATION: | SAMPLING REP: |
|---|---|---|---|---|
| 11/17/00 | PROJECT #: 21001-001 | Tim Gish | WR Grace Vermiculite Plant-Plant wide<br>WORK AREA: Libby, MT | Patrick McGowen<br>ANALYSIS BY: P. McGowen |

| SAMPLE TYPE: | PUMP CALIBRATION: | FILTER TYPE: | TEM FILTER: | FILTER FCA: | MICROSCOPE FIELD AREA: |
|---|---|---|---|---|---|
| Asbestos ☑ (NIOSH 7400)<br>Lead ☐ (NIOSH 7082)<br>Other ☐ _____<br>Method: _____ | Rotameter ☑<br>ID _____<br>Other: _____ | ___ 0.8 um 25 mm MCE<br>___ charcoal tubes<br>___ Silica Gel<br>___ Other 45 TEM | ✓ MCE <0.45um 25mm<br>___ PC <0.45um 37mm<br>Mfr. _____<br>Lot No. 1506 | ✓ 385 mm²<br>_____ mm²<br>___ NA | ✓ 0.00785 mm²<br>_____ mm²<br>___ NA |

| SAMPLE NUMBER/ PUMP NUMBER | SAMPLE TYPE | SAMPLE DESCRIPTION, LOCATION | ACTIVITY | TIME (24 HOUR CLOCK) Start | Stop | Total | FLOW RATE (L/MIN) Start | Stop | Avg. | AIR VOLUME (L) | DETECT. LIMIT OR LOQ | FIBERS/ PER FIELD | CONCENTRATION ✓ f/cc ___ other ___ ppm ___ mg/M³ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BO1 | Field Blank | — | — | — | — | — | — | — | — | — | — | 0/100 | Field Blank |
| BO2 | Field Blank | — | — | — | — | — | — | — | — | — | — | 0/100 | Field Blank |
| PM03 | Perimeter | Location #1 - North of Pole Barn - on perimeter | | 0853 | 1602 | 479 | 5.00 | 5.50 | 5.25 | 2514.75 | 0.001 | 4/100 | LOQ |
| PM04 | | Location #2 - NW of Planer building - on perimeter | | 0920 | 1607 | 481 | 5.50 | 5.50 | 5.50 | 2645.50 | 0.001 | 2/100 | < LOQ |
| PM05 | | Location #3 - west of Planer building - on perimeter | | 0930 | 1609 | 480 | 6.00 | 6.00 | 6.00 | 2880.00 | 0.001 | 3/100 | LOQ |
| PM06 | | Location #4 - SW of Planer building - on perimeter | | 0816 | 1616 | 480 | 5.00 | 5.50 | 5.25 | 2520.00 | 0.001 | 1/100 | < LOQ |
| PM07 | | Location #5 - South of warehouse building - on perimeter | | 0819 | 1618 | 479 | 5.00 | 5.50 | 5.25 | 2514.75 | 0.001 | 2/100 | < LOQ |
| PM08 | | Location #6 - NE of lumber storage building - on perimeter | | 0824 | 1629 | 485 | 5.00 | 5.00 | 5.00 | 2425.00 | 0.001 | 1.5/100 | < LOQ |
| PM09 | | Location #7 - NE corner of property - on stop sign - highway 37 | | 0827 | 1623 | 476 | 5.50 | 6.00 | 5.75 | 2737.00 | 0.001 | 3.0/100 | LOQ |
| PM10 | | 100' N. of NW corner of Pole Barn | | 0915 | 1535 | 380 | 5.00 | 5.00 | 5.00 | 1900.00 | 0.001 | 8/100 | 0.002 |
| ~~Blind Recount~~ PM11 | | SW corner of Pole Barn | | 0930 | 1540 | 370 | 5.00 | 5.00 | 5.00 | 1850.00 | 0.001 | 3.5/100 | LOQ |
| PM12/0789 | | 40' SW of Lumber storage building | | 0940 | 1552 | 372 | 5.00 | 5.00 | 5.00 | 1860.00 | 0.001 | 1/100 | 0.002 |

**Key:**

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

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Project No. 805169
File Code No. 4.5.6.4.223
Doc No.

# KOCH ENVIRONMENTAL HEALTH, INC.
# ASBESTOS FIBER COUNT WORKSHEET

| DATE: 11/17/00 | KEH PROJECT #: 21001-001 | KEH REP: Patrick McGurren |
|---|---|---|
| | MICROSCOPE ID #: 1 | ANALYST: Patrick McGurren |

| SAMPLE # | FIBER COUNT | F/N | F/N - B/NB / 100 | FIBERS/MM² | SAMPLE VOL. (L) | LOQ (fibers/cc) | FIBERS/CC | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| Field Blank B01 | 0 | 0/100 | — | — | — | — | — | Field Blank |
| Field Blank B02 | 0 | 0/100 | — | — | — | — | — | Field Blank |
| PM03 | 4.0 | 4/100 | 4/100/.00785 | 5.10 | 2514.75 | 0.001 | LOQ | — |
| PM04 | 2.0 | 2/100 | 2/100/.00785 | 2.55 | 2645.50 | 0.001 | < LOQ | — |
| PM05 | 3.0 | 3/100 | 3/100/.00785 | 3.82 | 2880.00 | 0.001 | < LOQ | — |
| PM06 | 1.0 | 1/100 | 1/100/.00785 | 1.27 | 2520.00 | 0.001 | < LOQ | — |
| PM07 | 2.0 | 2/100 | 2/100/.00785 | 2.55 | 2514.75 | 0.001 | < LOQ | — |
| PM08 | 1.5 | 1.5/100 | 1.5/100/.00785 | 1.91 | 2425.00 | 0.001 | < LOQ | — |
| PM09 | 3.0 | 3/100 | 3/100/.00785 | 3.82 | 2737.00 | 0.001 | LOQ | — |
| PM10 | 8.0 | 8/100 | 8/100/.00785 | 10.19 | 1900.00 | 0.001 | 0.002 | — |
| ~~Blind Recount~~ PM11 | 3.5 | 3.5/100 | 3.5/100/.00785 | 4.46 | 1850.00 | 0.001 | LOQ | — |
| PM12 | 9.0 | 9/100 | 9/100/.00785 | 11.46 | 1860.00 | 0.001 | 0.002 | — |

## SAMPLING INFORMATION:

| Effective Collection Area of Filter: | Microscope Field Area: | NIOSH 7400 Method A Rules ✓ |
|---|---|---|
| ✓ 385 mm², 25 mm filter | ✓ 0.00785 mm² | |
| 855 mm², 37 mm filter | other (list) | Other Method |

## ANALYTICAL INFORMATION:

MICROSCOPE ADJUSTMENTS: ✓ phase test ✓ micrometer ✓ adjust field iris ✓ adjust phase rings ✓ focus on samples

## ANALYST INFORMATION:

DATE: 11/18/00 ANALYST: Patrick McGurren SIGNATURE: Patrick McGurren

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Project No. 805169
File Code No. 4.5.6.4.224
Doc No.

KEH97/FORMS/FIBERFRM

# KOCH ENVIRONMENTAL HEALTH, INC.
## AIR CONTAMINANT SAMPLING FORM

| DATE: | CLIENT: | PROJECT CONTACT: | PROJECT LOCATION: | SAMPLING REP: |
|---|---|---|---|---|
| 11/18/00 | URS Radian<br>PROJECT #: 21001-001 | Tim Gish | W.R. Grace Vermiculite Plant - Plant wide<br>WORK AREA: Libby, MT | Patrick McGuire<br>ANALYSIS BY: P. McGuire |

| SAMPLE TYPE: | PUMP CALIBRATION: | FILTER TYPE: | TEM FILTER: | FILTER FCA: | MICROSCOPE FIELD AREA: |
|---|---|---|---|---|---|
| Asbestos ☑ (NIOSH 7400)<br>Lead ☐ (NIOSH 7082)<br>Other ☐ _____<br>Method: _____ | Rotameter ☑<br>ID _____<br>Other: _____ | ___ 0.8 um 25 mm MCE<br>___ charcoal tubes<br>___ Silica Gel<br>___ Other .45 TEM | ✓ MCE <0.45um 25mm<br>___ PC <0.45um 37mm<br>Mfl. _____<br>Lot No. 15506 | ✓ 385 mm²<br>_____ mm²<br>___ NA | ✓ 0.00785 mm²<br>_____ mm²<br>___ NA |

| SAMPLE NUMBER/ PUMP NUMBER | SAMPLE TYPE | SAMPLE DESCRIPTION, LOCATION | ACTIVITY | TIME (24 HOUR CLOCK) Start | Stop | Total | FLOW RATE (L/MIN) Start | Stop | Avg. | AIR VOLUME (L) | DETECT. LIMIT OR LOQ | FIBERS/ PER FIELD | CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| — | Field Blank | — | — | — | — | — | — | — | — | — | — | — | — |
| — | Field Blank | — | — | — | — | — | — | — | — | — | — | — | — |
| P13 | EX | Inside truck - worn by Max Moncur | loading trucks @ expert plant & unloading them @ the mine | 0745 | 0815 | 30 | 2.00 | 2.00 | 2.00 | 60.00 | 0.045 | 1.5/100 | < LOQ |
| P14 | P | Inside truck - worn by Terry Johnson | | 0831 | 1427 | 356 | 2.00 | 2.00 | 2.00 | 712.00 | 0.004 | 3.5/100 | < LOQ |
| P15 | ↓ | Inside truck - worn by Doug Carr | ↓ | 0829 | VOID | — | 2.00 | VOID | VOID | VOID | VOID | | VOID - DUE TO The sample over-running the shift. |
| P16 | ↓ | Inside truck - worn by Max Moncur | ↓ | 0815 | 1351 | 336 | 2.00 | 2.00 | 2.00 | 672.00 | 0.004 | 15.0/100 | 0.011 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Blind Recount P1109 | Recount | Location #7 - NE corner of property - on stop sign Highway 37 | — | 0849 | 1449 | 360 | 5.50 | 6.00 | 5.75 | 2070.00 | 0.001 | 3/100 | LOQ |

**Key:**

Sample Type:
- P = Personal
- Ex = Excursion
- IWA = Inside Work Area
- OWA = Outside Work Area
- BAK = Background
- A = Ambient Air
- HEX = HEPA Exhaust
- CL = Clearance Sample

Activity:
- PREP = Work Area Preparation
- REM - Removal
- GB - Glovebag
- FC - Final Cleaning
- BO = Bagout
- TD = Tear Down
- PP - Paint Prep

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Project No. 805169
File Code No. 4.5.5.2.242
Doc No. _____

KOCH ENVIRONMENTAL HEALTH, INC.
7342 South Moore Court
Littleton, CO 80127
Phone: (303) 932-8484 FAX: (303) 932-8585

# CONTRACTOR PERSONNEL AIR SAMPLING SUMMARY

| | | | |
|---|---|---|---|
| **Client:** URS Radian<br>**Project:** 21001-001 | **Project Contact:** Tim Gish | **Location:** W.R. Grace Vermiculite Plant - Plant wide<br>Libby, MT | **KEH Rep:** Patrick McGuire<br>**Analysis By:** Patrick McGuire |

| | | | | |
|---|---|---|---|---|
| **Date:** 11/18/00 | **Calibration:** ✓ Rotameter ____ ID<br>____ Other ____ ID | **Microscope Field Area:** ✓ 0.00785 sq mm<br>____ other ____ sq mm | **PCM Filter:** ✓ 0.8 um25mm Mft. ____<br>____ 0.8 um37mm Lot# ____ | **Other Media:** ____ Type Mft. ____<br>____ Type Mft. ____ |

| | | | |
|---|---|---|---|
| **Name:** Max MonCur<br>**SSN:** 520-36-5145 | **Name:** Terry Johnson<br>**SSN:** 516-78-1150 | **Name:** Doug Carr<br>**SSN:** 101265 | **Name:** ____<br>**SSN:** |

| Sample # | Minutes | Volume | F/cc | Sample # | Minutes | Volume | F/cc | Sample # | Minutes | Volume | F/cc | Sample # | Minutes | Volume | F/cc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TOTAL | | | | TOTAL | | | | TOTAL | | | | TOTAL | | |
| P13 | 30 | 60.00 | <LOQ | P14 | 356 | 712.00 | <LOQ | P15 | VOID | | VOID | | | | |
| P16 | 336 | 672.00 | 0.011 | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| TWA: 0.008 F/cc | TWA: 0.001 F/cc (LOQ) | TWA: VOID | TWA: N/a |
| Comments: 0.03 + 3.696 / 480<br>3726 / 480 | Comments: 0.356 / 480 | Comments: Sample voided due to sample over-running the work shift. | Comments: |

URS

Project No. 805169
File Code No. 4.5.5.2.243
Doc No. ____

# KOCH ENVIRONMENTAL HEALTH, INC.
# ASBESTOS FIBER COUNT WORKSHEET

| DATE: 11/18/00 | KEH PROJECT #: 21001-001 | KEH REP: Patrick McGurren |
|---|---|---|
| | MICROSCOPE ID #: 1 | ANALYST: Patrick McGurren |

| SAMPLE # | FIBER COUNT | F/N | F/N -B/NB / 100 | FIBERS/MM² | SAMPLE VOL. (L) | LOQ (fibers/cc) | FIBERS/CC | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| ~~Field Blank~~ | — | — | — | — | — | — | — | — |
| ~~Field Blank~~ | — | — | — | — | — | — | — | — |
| P13 | 1.5 | 1.5/100 | 1.5/100/.00785 | 1.91 | 60.00 | 0.045 | < LOQ | — |
| P14 | 3.5 | 3.5/100 | 3.5/100/.00785 | 4.46 | 712.00 | 0.004 | < LOQ | — |
| P15 | VOID | VOID | VOID | VOID | VOID | — | VOID | VOID DUE TO SAMPLE OVER-RUNNING SHIFT |
| P16 | 15.0 | 15/100 | 15/100/.00785 | 19.11 | 672.00 | 0.004 | 0.011 | — |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ~~Blind Recount~~ Blind recount P1409 | 3.0 | 3/100 | 3/100/.00785 | 3.82 | 2070.00 | 0.001 | LOQ | — |

## SAMPLING INFORMATION:

| Effective Collection Area of Filter: | Microscope Field Area: | NIOSH 7400 Method A Rules ✓ |
|---|---|---|
| ✓ 385 mm², 25 mm filter | ✓ 0.00785 mm² | |
| 855 mm², 37 mm filter | other (list) | Other Method |

## ANALYTICAL INFORMATION:

| MICROSCOPE ADJUSTMENTS: | ✓ phase test | ✓ micrometer | ✓ adjust field iris | ✓ adjust phase rings | ✓ focus on samples |
|---|---|---|---|---|---|

## ANALYST INFORMATION:

| DATE: 11/20/00 | ANALYST: Patrick McGurren | SIGNATURE: |
|---|---|---|

URS

Project No. 805169

File Code No. 4.5.6.2.244

Doc No.

KEH97/FORMS/FIBERFRM

# KOCH ENVIRONMENTAL HEALTH, INC.
## AIR CONTAMINANT SAMPLING FORM

| DATE: | CLIENT: URS Radian | PROJECT CONTACT: | PROJECT LOCATION: | SAMPLING REP: |
|---|---|---|---|---|
| 11/18/00 | PROJECT #: 21001-001 | Tim Gish | W.R. Grace Vermiculite Plant - Plant wide<br>WORK AREA: Libby, MT | Patrick McGuiness<br>ANALYSIS BY: P. McGuiness |

| SAMPLE TYPE: | PUMP CALIBRATION: | FILTER TYPE: | TEM FILTER: | FILTER FCA: | MICROSCOPE FIELD AREA: |
|---|---|---|---|---|---|
| Asbestos ☑ (NIOSH 7400)<br>Lead ☐ (NIOSH 7082)<br>Other ☐ _____<br>Method: _____ | Rotameter ☑<br>ID _____<br>Other: _____ | ___ 0.8 um 25 mm MCE<br>___ charcoal tubes<br>___ Silica Gel<br>___<br>Other .45 TEM | ✓ MCE <0.45um 25mm<br>___ PC <0.45um 37mm<br>Mfr. _____<br>Lot No. 15016 | ✓ 385 mm²<br>_____ mm²<br>___ NA | ✓ 0.00785 mm²<br>_____ mm²<br>___ NA |

| SAMPLE NUMBER/ PUMP NUMBER | SAMPLE TYPE | SAMPLE DESCRIPTION, LOCATION | ACTIVITY | TIME (24 HOUR CLOCK) Start | Stop | Total | FLOW RATE (L/MIN) Start | Stop | Avg. | AIR VOLUME (L) | DETECT. LIMIT OR LOQ | FIBERS/ PER FIELD | CONCENTRATION ✓ F/cc ___ other ___ ppm ___ mg/M³ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B01 | Field Blank | — | — | — | — | — | — | — | — | — | — | 0/100 | Field Blank |
| B02 | Field Blank | — | — | — | — | — | — | — | — | — | — | 0/100 | Field Blank |
| PM03 | Perimeter | Location #1 - North of Pole Barn - on perimeter | — | 0818 | 1426 | 368 | 5.50 | 5.00 | 5.25 | 1932.00 | 0.001 | 4.0/100 | LOQ |
| PM04 | | Location #2 - NW of Planer building - on perimeter | — | 0822 | 1432 | 370 | 5.00 | 5.00 | 5.00 | 1850.00 | 0.001 | 1.0/100 | < LOQ |
| PM05 | | Location #3 - West of Planer building - on perimeter | — | 0825 | 1435 | 370 | 5.50 | 6.00 | 5.75 | 2127.50 | 0.001 | 4.5/100 | LOQ |
| PM06 | | Location #4 - SW of Planer building - on perimeter | — | 0838 | 1439 | 361 | 5.00 | 5.50 | 5.25 | 1895.25 | 0.001 | 6.0/100 | 0.002 |
| PM07 | | Location #5 - South of Warehouse building - on perimeter | — | 0841 | 1442 | 361 | 5.00 | 5.50 | 5.25 | 1895.25 | 0.001 | 3.0/100 | LOQ |
| PM08 | | Location #6 - NE of Lumber storage building - on perimeter | — | 0846 | 1447 | 361 | 5.00 | 5.00 | 5.00 | 1805.00 | 0.001 | 3.5/100 | LOQ |
| PM09 | | Location #7 - NE corner of property - on stop sign - Highway 37 | — | 0849 | 1449 | 360 | 5.50 | 6.00 | 5.75 | 2070.00 | 0.001 | 6.0/100 | 0.001 |
| PM10 | | 100' N. of NW corner of Pole Barn | — | 0853 | 1354 | 301 | 5.00 | 5.00 | 5.00 | 1505.00 | 0.002 | 0/100 | < LOQ |
| ~~Blind Recount~~ PM11 | | SW corner of Pole Barn | — | 0857 | 1358 | 301 | 5.00 | 5.00 | 5.00 | 1505.00 | 0.002 | 5.0/100 | LOQ |
| PM12 | | 40' SW of Lumber storage building | — | 0907 | 1412 | 305 | 5.00 | 5.00 | 5.00 | 1525.00 | 0.002 | 4.5/100 | < LOQ |

**Key:**

Sample Type: P = Personal; Ex = Excursion; IWA = Inside Work Area; OWA = Outside Work Area; BAK = Background; A = Ambient Air; HEX = HEPA Exhaust; CL = Clearance Sample

Activity: PREP = Work Area Preparation; REM - Removal; GB - Glovebag; FC - Final Cleaning; BO = Bagout; TD = Tear Down; PP - Paint Prep

URS

COPY

Project No. 805169

File Code No. 4.5.b.4.225

# KOCH ENVIRONMENTAL HEALTH, INC.
# ASBESTOS FIBER COUNT WORKSHEET

| DATE: 11/~~20~~ 18/00 | KEH PROJECT #: 21001-001 | KEH REP: Patrick McGurren |
|---|---|---|
| | MICROSCOPE ID #: 1 | ANALYST: Patrick McGurren |

| SAMPLE # | FIBER COUNT | F/N | F/N -B/NB / 100 | FIBERS/MM² | SAMPLE VOL. (L) | LOQ (fibers/cc) | FIBERS/CC | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| Field Blank B01 | 0 | 0/100 | — | — | — | — | — | Field Blank |
| Field Blank B02 | 0 | 0/100 | — | — | — | — | — | Field Blank |
| PM03 | 4.0 | 4/100 | 4/100/.00785 | 5.10 | 1932.00 | 0.001 | LOQ | — |
| PM04 | 1.0 | 1/100 | 1/100/.00785 | 1.27 | 1850.00 | 0.001 | <LOQ | — |
| PM05 | 4.5 | 4.5/100 | 4.5/100/.00785 | 5.73 | 2127.50 | 0.001 | LOQ | — |
| PM06 | 6.0 | 6/100 | 6/100/.00785 | 7.64 | 1895.25 | 0.001 | 0.002 | — |
| PM07 | 3.0 | 3/100 | 3/100/.00785 | 3.82 | 1895.25 | 0.001 | LOQ | — |
| PM08 | 3.5 | 3.5/100 | 3.5/100/.00785 | 4.46 | 1805.00 | 0.001 | LOQ | — |
| PM09 | 6.0 | 6/100 | 6/100/.00785 | 7.64 | 2070.00 | 0.001 | 0.001 | — |
| PM10 | 0 | 0/100 | 0/100/.00785 | 0 | 1505.00 | 0.002 | <LOQ | — |
| ~~Blind Recount~~ PM11 | 5.0 | 5/100 | 5/100/.00785 | 6.37 | 1505.00 | 0.002 | LOQ | — |
| PM12 | 4.5 | 4.5/100 | 4.5/100/.00785 | 5.73 | 1525.00 | 0.002 | <LOQ | — |

## SAMPLING INFORMATION:

| Effective Collection Area of Filter: | Microscope Field Area: | NIOSH 7400 Method A Rules ✓ |
|---|---|---|
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| 855 mm², 37 mm filter | other (list) | Other Method |

## ANALYTICAL INFORMATION:

| MICROSCOPE ADJUSTMENTS: | ✓ phase test | ✓ micrometer | ✓ adjust field iris | ✓ adjust phase rings | ✓ focus on samples |
|---|---|---|---|---|---|

## ANALYST INFORMATION:

| DATE: 11/20/00 | ANALYST: Patrick McGurren | SIGNATURE: Patrick McGurren |
|---|---|---|

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Project No. 805164
File Code No. 4.5.6.4.226
Doc Rec No.

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